



A STUDY OF EFFECTIVENESS OF OSCE IN THE FORMATIVE AND SUMMATIVE ASSESSMENT OF MEDICAL STUDENTS- A STUDENT CENTERED STUDY

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ABSTRACT

Medical education needs periodic reforms to cope up with the developing technologies in the field of medicine which cannot be assessed with conventional methods. Apart from the knowledge, skill and attitude also need to be assessed. Objective structured clinical examination (OSCE) is considered as a suitable method for assessment of all these aspects, in many countries. However in India, this method of assessment is still not very popular. We conducted a study to understand the experience of undertaking OSCE and to know the effectiveness of OSCE in the assessment of medical students.

KEY WORDS: OSCE; formative; summative; assessment

Introduction:

In medical education, evaluation of different aspects of learning is an absolute necessity. There are different methods of evaluation including written essays, viva voce, case presentations and multiple choice questions, which assess different knowledge domains of a student. Most of these methods reflect the overall performance of the student, but not based on testing the individual competencies.¹ Objective structured clinical examination (OSCE) is now increasingly accepted as a useful tool in evaluation of the knowledge as well as clinical skills of medical students. Harden described OSCE as a method of evaluation for undergraduate medical students in early 1970s. The OSCE is defined as "an approach to the assessment of clinical competence in which the components of competence are assessed in a well planned or structured way with attention being paid to objectivity".² OSCE is a very different experience for students, in comparison to the conventional method of examinations like essays, viva voce and case presentations. A review of the literature on OSCE shows that this method originated from medical education, where it was initially developed during the 1970's to replace more subjective assessments such as long and short-cases.³ Now it is being adopted by other disciplines of healthcare education.⁴ There are many studies in this subject which document the implementation and evaluation of an OSCE within a variety of programs.^{5,6} However, in India this method of assessment is still not very popular, and in most of the medical colleges, the clinical assessment is done by case presentation and "viva voce". There are only few studies in the literature which are student oriented.⁴ We conducted a study involving the undergraduate medical students posted in the department otorhinolaryngology, to understand the experience of a medical student in appearing for an OSCE, and to know the effectiveness of OSCE in the assessment of knowledge, attitude and skills of undergraduate medical students.

Methodology:

Sixty students posted in the department of Otorhinolaryngology, were selected for the study. A pre test was conducted to understand the existing knowledge of these students regarding the OSCE. A practice OSCE session was conducted in Otorhinolaryngology subject, at the end of a clinical posting of four weeks. Instructions were given about the pattern of examination, the role of observer and method of scoring. One station each of performing a tuning fork test which was observed by an observer, counseling a mother of a child with enlarged adenoids and serous otitis media, identifying and calculating the degree of hearing impairment in an audiogram, identifying an instrument and answering the questions pertaining to that instrument, identifying a radiograph and concluding a diagnosis, a viva station were included in the session. A post test was conducted in the form of a questionnaire, where the students were asked to note down their opinion based on their experience. The responses of the students were tabulated and analyzed.

Results and discussion:

Total Sixty students participated in the study, including 34 boys and 26 girls.

Past experience of appearing for OSCE: Fifty six students (94%) had appeared only once for objective structured practical examination (OSPE) in first phase of MBBS, four students had not appeared before this. These four students were from the previous batch, as OSPE was not introduced for their batch. In first year of MBBS course, OSPE was conducted during internal assessment.

Preferred method of evaluation: Forty four students (74%) felt OSCE is a preferred method of their evaluation in the internal assessment. Eight of them felt case presentation as a preferred method, and two opined viva voce would be more useful.

Objectivity and bias: Fifty six students (94%) mentioned OSCE provide more objectivity to the assessment than case presentation alone and these students considered OSCE is a good option for assessment after the end of clinical postings. Forty four students (74%) felt there is no bias in OSCE, whereas sixteen students (26%) felt OSCE cannot completely eliminate bias during assessment.

OSCE as a method of assessment of different aspects of knowledge: Forty eight students (80%) opined that a properly organized OSCE can assess all or most of the clinical knowledge and skill of a medical student, whereas twelve did not agree with this.

Disadvantages: Thirty students (50%) mentioned there are no disadvantages in OSCE. Sixteen students (26%) felt fear/ anxiety during performing a task under observation could adversely affect their performance. But all these students had scored well in their OSCE. Twelve students (20%) felt conducting OSCE is a tedious procedure. Eight students (13%) opined the questions are limited and they cannot express their knowledge beyond this limit. However we concluded that this is because of the small number of stations in the practice OSCE session conducted by us.

Conclusion:

In this study, student valued OSCE as a good assessment method. The results of the study showed that OSCE is an effective method of assessing the knowledge, attitude and skill of a medical student, and OCE can be implemented as a method of evaluation in the formative as well as summative assessment. OSCEs can be integrated within a curriculum along with other evaluation methods like long and short case discussion to provide more objectivity. However, this being a new method, these students need careful instructions and support before conducting OSCE to eliminate fear/ anxiety.

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